

Amendments to the Claims:

Please replace all prior claims versions and listings with the following:

Listing of the Claims:

1-73. Cancelled

74. (previously presented) A diesel particulate filter comprising a plugged, wall-flow honeycomb filter body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein:

the filter exhibits a CTE (25-800°C) of less than $13 \times 10^{-7}/^\circ\text{C}$, a bulk filter density of less than 0.60 g/cm³, a median pore diameter, d_{50} , of less than 15 micrometers, a porosity and pore size distribution that satisfy the relationship $P_m \leq 3.75$, wherein P_m is equal to $10.2474\{1/[(d_{50})^2(\% \text{porosity}/100)]\} + 0.0366183(d_{90}) - 0.00040119(d_{90})^2 + 0.468815(100/\% \text{porosity})^2 + 0.0297715(d_{50}) + 1.61639(d_{50}-d_{10})/d_{50}$, wherein d_{10} , and d_{90} are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and $d_{10} < d_{50} < d_{90}$.

75. (previously presented) A diesel particulate filter in accordance with claim 74 wherein the median pore diameter, d_{50} is less than 12 micrometers.

76. (previously presented) A diesel particulate filter comprising a plugged, wall-flow honeycomb filter body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein:

the filter exhibits a CTE (25-800°C) of less than $13 \times 10^{-7}/^\circ\text{C}$, a bulk filter density of less than 0.60 g/cm³, a median pore diameter, d_{50} , of less than 25 micrometers, a porosity and pore size distribution that satisfy the relationship $P_m \leq 3.75$, wherein P_m is equal to $10.2474\{1/[(d_{50})^2(\% \text{porosity}/100)]\} + 0.0366183(d_{90}) - 0.00040119(d_{90})^2 + 0.468815(100/\% \text{porosity})^2 + 0.0297715(d_{50}) + 1.61639(d_{50}-d_{10})/d_{50}$, wherein d_{10} , and d_{90} are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and $d_{10} < d_{50} < d_{90}$ and wherein d_{90} is less than 40 micrometers.

77. (previously presented) A diesel particulate filter in accordance with claim 76 wherein d_{90} is less than 30 micrometers.

78. (previously presented) A diesel particulate filter in accordance with claim 77 wherein d_{90} is less than 20 micrometers.

78. (previously presented) A diesel particulate filter in accordance with claim 77 wherein d_{90} is less than 20 micrometers.

79. (previously presented) A diesel particulate filter in accordance with claim 76 wherein the filter exhibits a CTE (25-800°C) of less than or equal to $5.5 \times 10^{-7}/^{\circ}\text{C}$ and a %porosity of greater than or equal to 55.2 %.

80. (previously presented) A diesel particulate filter in accordance with claim 76 wherein the filter exhibits a CTE (25-800°C) of less than or equal to $5.5 \times 10^{-7}/^{\circ}\text{C}$ and a %porosity of greater than or equal to 56.5 %.

81. (currently amended) A diesel particulate filter in accordance with claim 76 A diesel particulate filter comprising a plugged, wall-flow honeycomb filter body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein the filter exhibits a CTE (25-800°C) of less than or equal to $4.2 \times 10^{-7}/^{\circ}\text{C}$, a bulk filter density of less than 0.60 g/cm^3 , a median pore diameter, d_{50} , of less than 25 micrometers, a porosity and pore size distribution that satisfy the relationship $P_m \leq 3.75$, wherein P_m is equal to $10.2474 \{1/[(d_{50})^2(\% \text{porosity}/100)]\} + 0.0366183(d_{90}) - 0.00040119(d_{90})^2 + 0.468815(100/\% \text{porosity})^2 + 0.0297715(d_{50}) + 1.61639(d_{50}-d_{10})/d_{50}$, wherein d_{10} , and d_{90} are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and $d_{10} < d_{50} < d_{90}$ and wherein d_{90} is less than 40 micrometers and greater than or equal to 74.5 % of the % porosity has a pore size of greater 10 μm and less than 50 μm .

82. (currently amended) A diesel particulate filter in accordance with claim 76 A diesel particulate filter comprising a plugged, wall-flow honeycomb filter body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein the filter exhibits a CTE (25-800°C) of less than or equal to $4.2 \times 10^{-7}/^{\circ}\text{C}$, and a %porosity of greater than or equal to 59.4 %, a bulk filter density of less than 0.60 g/cm^3 , a median pore diameter, d_{50} , of less than 25 micrometers, a porosity and pore size distribution that satisfy the relationship $P_m \leq 3.75$, wherein P_m is equal to $10.2474 \{1/[(d_{50})^2(\% \text{porosity}/100)]\} + 0.0366183(d_{90}) - 0.00040119(d_{90})^2 + 0.468815(100/\% \text{porosity})^2 + 0.0297715(d_{50}) + 1.61639(d_{50}-d_{10})/d_{50}$,

wherein d_{10} and d_{90} are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and $d_{10} < d_{50} < d_{90}$ and wherein d_{90} is less than 40 micrometers.

83. (currently amended) A diesel particulate filter in accordance with claim 76 A diesel particulate filter comprising a plugged, wall-flow honeycomb filter body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein the filter exhibits a CTE (25-800°C) of less than or equal to $4.3 \times 10^{-7}/^{\circ}\text{C}$, and a %porosity of greater than or equal to 56.5 % %, a bulk filter density of less than 0.60 g/cm³, a median pore diameter, d_{50} , of less than 25 micrometers, a porosity and pore size distribution that satisfy the relationship $P_m \leq 3.75$, wherein P_m is equal to $10.2474 \{1/[(d_{50})^2(\% \text{porosity}/100)]\} + 0.0366183(d_{90}) - 0.00040119(d_{90})^2 + 0.468815(100/\% \text{porosity})^2 + 0.0297715(d_{50}) + 1.61639(d_{50}-d_{10})/d_{50}$, wherein d_{10} and d_{90} are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and $d_{10} < d_{50} < d_{90}$ and wherein d_{90} is less than 40 micrometers.

84. (currently amended) A diesel particulate filter in accordance with claim 76 A diesel particulate filter comprising a plugged, wall-flow honeycomb filter body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein the filter exhibits a CTE (25-800°C) of greater than $4.0 \times 10^{-7}/^{\circ}\text{C}$ and less than $7.0 \times 10^{-7}/^{\circ}\text{C}$, and a %porosity of greater than or equal to 69.7 % %, a bulk filter density of less than 0.60 g/cm³, a median pore diameter, d_{50} , of less than 25 micrometers, a porosity and pore size distribution that satisfy the relationship $P_m \leq 3.75$, wherein P_m is equal to $10.2474 \{1/[(d_{50})^2(\% \text{porosity}/100)]\} + 0.0366183(d_{90}) - 0.00040119(d_{90})^2 + 0.468815(100/\% \text{porosity})^2 + 0.0297715(d_{50}) + 1.61639(d_{50}-d_{10})/d_{50}$, wherein d_{10} and d_{90} are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and $d_{10} < d_{50} < d_{90}$ and wherein d_{90} is less than 40 micrometers.